

I claim:

1. A machine for removing articles such as debris and the like deposited on a tract of ground, comprising:

a wheel unit;

a support frame mounted on said wheel unit, having means for advancing said machine along said tract of ground;

a endless conveyor mounted on said support frame, having a plurality of tines projecting from an outer side thereof and a flight extending from a front end adjacent ground level, upwardly and rearwardly to an elevated rear end;

a receptacle mounted on said support frame, positioned to receive articles removed by said tines and carried upwardly and rearwardly on said conveyor and discharged into said receptacle, and having a set of tines cooperable with said conveyor tines to dislodge articles carried by said conveyor tines; and

means mounted on said support frame for driving said conveyor.

2. A machine according to claim 1 wherein said means for advancing said machine comprises a drawbar connected to said support frame and connectable to a prime mover.

3. A machine according to claim 1 wherein said conveyor tines are spaced longitudinally and transversely along said conveyor.

4. A machine according to claim 1 wherein said conveyor tines are arranged in transversely disposed, longitudinally spaced rows.

5. A machine according to claim 1 wherein a pair of said conveyor tines are formed of a strand of wire bent at the center thereof to form a U-shaped center portion, having each of the leg segments of said U-shaped portion contoured into a spiral, spring portion and having each

of said spiral, spring portion continuing as a free end disposed substantially tangentially relative to said spiral, spring portion.

6. A machine according to claim 5 including a plurality of base strips transversely disposed and longitudinally spaced on and rigidly secured to said conveyor, and a plurality of retainer strips each mounted on said conveyor in alignment with one of said base strips and wherein the U-shaped portions of said tines are seated on an outer side of said conveyor, interposed between a pair of base and retainer strips.

7. A machine according to claim 1 wherein said receptacle tines are displaced transversely relative to said conveyor tines to permit each conveyor tine to pass between a pair of receptacle tines thus causing articles carried by said conveyor to be combed out of said conveyor tines.

8. A machine according to claim 1 wherein said receptacle tines are mounted on a front, transversely disposed wall of said receptacle.

9. A machine according to claim 1 wherein said receptacle tines are disposed in a transverse rod and perpendicular to a bottom flight of said conveyor, said conveyor tines transverse arcuate paths at an upper rear end of said conveyor and then cooperate with said receptacle tines as they pass therebetween to cause articles carried by said conveyor to dislodge and be discharged into said receptacle.

10. A machine according to claim 1 wherein said conveyor is perforated to allow ground particles deposited on said conveyor to gravity fall therethrough.

11. A machine according to claim 1 wherein said conveyor is of a chain link construction.

12. A machine according to claim 1 wherein said conveyor includes a flight at a lower, front end thereof, spaced from and disposed substantially parallel to ground level.

13. A machine according to claim 1 including at least one idler wheel mounted on said support frame and operatively engaging an underside flight of said conveyor.

14. A machine according to claim 1 wherein said receptacle is pivotal about a transverse axis.

15. A machine according to claim 1 wherein said receptacle is tiltable about a transverse axis passing therethrough.

16. A machine according to claim 1 including a transversely disposed shaft mounted on said support frame and wherein said receptacle includes a pair of lift arms pivotally connected to said shaft, and at least one fluid actuated cylinder assembly operatively interconnecting said support frame and one of said lift arms.

17. A machine according to claim 1 including a transversely disposed shaft journaled in said support frame having a sprocket with a radially disposed arm, a pair of trunnions mounted on side walls of said receptacle, at least one sprocket rigidly mounted on one of said trunnions, an endless chain trained around said sprockets for transmitting rotary motion therebetween, and a fluid actuated cylinder assembly interconnecting said support frame and said radially disposed arm operative to pivot said arm and correspondingly tilting said receptacle.

18. A machine according to claim 16 including a sprocket provided with a radially disposed arm mounted on said shaft, a sprocket rigidly mounted on said receptacle coaxially with a pivotal connection of said arms to said receptacle and pivotal about said axis, an endless chain trained about said sprockets for transmitting rotary motion therebetween and a fluid actuated

assembly interconnecting said support frame and said radially disposed arm operative to pivot said arm and correspondingly tilting said receptacle.

19. A machine according to claim 1 wherein said conveyor driving means includes a hydraulic motor.

20. A machine according to claim 1 including a pair of side walls mounted on said support frame and wherein said conveyor is disposed therebetween.

21. A machine according to claim 2 wherein the angular relationship of said support frame in said drawbar may be varied to correspondingly vary the position of said tines relative to the ground.

22. A machine for removing articles such as debris and the like deposited on a tract of ground, comprising:

a wheel unit;

a support frame mounted on said wheel unit, having means for advancing said machine along said tract of ground;

an endless, perforated conveyor mounted on said support frame, having a plurality of tines projecting from an outer side thereof and a flight extending from a front end thereof adjacent ground level, upwardly and rearwardly to an elevated rear end thereof;

a receptacle mounted on said support frame, positioned to receive articles removed by said tines and carried upwardly and rearwardly on said conveyor and discharged thereinto; and

means mounted on said support frame for driving said conveyor

23. A machine according to claim 22 wherein said conveyor tines are spaced longitudinally and transversely along said conveyor.

24. A machine according to claim 22 wherein said conveyor tines are arranged in transversely disposed, longitudinally spaced rows.